



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 18, 2020

Robert Avalos  
Manager of Registrations  
Loveland Products Inc.  
P.O. Box 1286  
Greeley, CO 80632-1286

Subject: Registration Review Label Mitigation for Pendimethalin and Imazethapyr  
Product Name: PRE-Tector Plus EC  
EPA Registration Number: 34704-1115  
Application Dates: 06/29/2018 & 02/03/2020  
Decision Numbers: 567934 & 559342

Dear Mr. Avalos:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Pendimethalin and Imazethapyr Interim Decisions, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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If you have any questions about this letter, please contact Quinn Gavin by phone at 703-347-0325, or via email at [gavin.quinn@epa.gov](mailto:gavin.quinn@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

[Note to reviewer: [Text] in brackets denotes optional or explanatory language]

Imazethapyr	GROUP	2	HERBICIDE
Pendimethalin	GROUP	3	HERBICIDE

# PRE-Tector™ Plus EC Herbicide

For use in soybeans and field corn.

(Apply only to CLEARFIELD® corn hybrids)

For use in English peas, Lima beans, Navy, Great Northern, Red Kidney, Black Turtle, Pinto, Cranberry and Small White Type Dry Beans ONLY in Illinois, Iowa, Michigan, Minnesota, North Dakota, South Dakota and Wisconsin.

### ACTIVE INGREDIENTS:

<b>Imazethapyr:</b> (±)-2-[4,5-dihydro-4-methyl-4-(1-methyl-ethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid .....	2.24%
<b>Pendimethalin:</b> (N-1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine .....	30.24%
<b>Other Ingredients*:</b> .....	67.52%
<b>Total:</b>	100.00%

PRE-Tector™ Plus EC herbicide contains 2.9 pounds of active ingredients per gallon.

(2.7 pounds active ingredient of pendimethalin and 0.2 pound acid equivalent of imazethapyr).

\*contains petroleum distillates.

## KEEP OUT OF REACH OF CHILDREN WARNING

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete First Aid, Precautionary Statements, Directions For Use, and Conditions of Sale and Warranty.

EPA REG. NO. 34704-1115

EPA EST. NO.

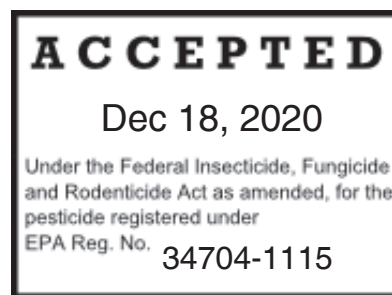
NET CONTENTS:

[Label ID Print Code]

FORMULATED FOR

LOVELAND PRODUCTS, INC.

P.O. BOX 1286, GREELEY, COLORADO 80632-1286



<b>FIRST AID</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• DO NOT induce vomiting unless told to by a poison control center or doctor.</li> <li>• DO NOT give anything to an unconscious person.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>NOTE TO PHYSICIAN</b>	
Because of increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-944-8565. 24/7 for emergency medical treatment information.	

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)**  
**WARNING**

Harmful if swallowed. Causes substantial but temporary eye injury. Wear goggles, or a protective face shield, or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, made of butyl rubber ≥14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥14 mils, or nitrile rubber ≥14 mils
- Shoes plus socks

Follow manufacturer’s instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240)(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish. **DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

**NON-TARGET ORGANISM ADVISORY STATEMENT:** This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

**SURFACE WATER ADVISORY STATEMENT:** This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application.

A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of imazethapyr from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

**GROUNDWATER ADVISORY STATEMENT:** This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

### **Proper Handling Instructions**

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes or reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinsewater or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained.

The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain, at a minimum, 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad.

Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

**DO NOT** apply this product through any type of irrigation system.

Product must be used in a manner which will prevent back-siphoning in wells, spills or improper disposal of excess pesticide/spray mixture.

### **DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

**DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

This labeling must be in the possession of the user at the time of pesticide application.

Observe all directions, restrictions, cautions and limitations in this label. **DO NOT** use PRE-Tector™ Plus EC Herbicide (hereafter may also be referred to as *this product*) other than in accordance with the instructions set forth in this label. Keep container closed to avoid spills and contamination.

### **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.**

**Exception:** If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, made of butyl rubber ≥14 mils, or natural rubber ≥14 mils, or neoprene rubber ≥14 mils, or nitrile rubber ≥14 mils
- Shoes plus socks

## **PRODUCT INFORMATION**

This product is effective in providing weed control in conservation tillage systems. This product may be applied in minimum tillage, no-till, or conventional tillage to field corn (CLEARFIELD® corn) or soybeans, and for use in English peas, Lima beans, Navy, Great Northern, Red Kidney, Black Turtle, Pinto, Cranberry and Small White Type Dry Beans ONLY in Illinois, Iowa, Michigan, Minnesota, North Dakota, South Dakota and Wisconsin.

### **Replanting**

If replanting is necessary in a field previously treated with this product, the field may be replanted to soybeans, peanuts, lima beans or Southern peas. Rework the soil no deeper than the treated zone. CLEARFIELD corn may also be replanted, but **DO NOT** rework the soil. Plant the corn at least 2 inches deep or below the treated zone. **DO NOT** make more than one application of this product per year.

## **WEED RESISTANCE MANAGEMENT**

For resistance management, please note that PRE-Tector Plus EC contains both a (Group 2)/ imazethapyr and a (Group 3)/ pendimethalin herbicide. Any weed population may contain plants naturally resistant to (Group 2) and/or (Group 3) herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of PRE-Tector Plus EC or other Group 2 and Group 3 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage ( or other mechanical control methods), cultural ( e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Loveland Products, Inc. at 1-888-574-2878.

## SPRAY DRIFT

### Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply during temperature inversions.

### Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

### Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

## SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### Controlling Droplet Size – Groundboom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

### **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

### **RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

### **WIND**

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **Boom-less Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### **Handheld Technology Applications:**

Take precautions to minimize spray drift.

### **MIXING INSTRUCTIONS**

Fill the spray tank 1/4 to 1/2 full with clean water. While agitating, add the required amount of product, and then fill the remainder of the tank with clean water. Maintain agitation while spraying to ensure a uniform spray mixture.

When tank mixing this product with recommended herbicides, add the other herbicides and adjuvants in the following order while agitating:

1. Fill spray tank 1/4 to 1/2 full with clean water.
2. Add soluble packet products and thoroughly mix.
3. Add WP (wetable powder), DG (dispersible granule), DF (dry flowable), or LF (liquid flowable) formulations.
4. Add aqueous solution products.
5. Add PRE-Tector Plus EC.
6. Add other EC (emulsifiable concentrate) products.
7. Add surfactant to the spray tank (if weeds are present).
8. Add liquid fertilizer.
9. While agitating, fill the remainder of the tank with water.

When Gramoxone® Extra herbicide is included in a tank mixture; add 8 ounces of nonionic surfactant per 100 gallons of spray mixture as the last ingredient in the tank.

Only use surfactants, adjuvants, and crop oils that are cleared for application to growing crops. To avoid injury to sensitive crops, spray equipment used for applications of this product must be drained and thoroughly cleaned with water before being used to apply other products.



## SPRAYING INSTRUCTIONS

**DO NOT** apply if wind conditions, temperature inversion conditions, or other conditions may cause drift onto adjacent areas or sensitive crops. Sensitive crops include, but are not limited to, leafy vegetables, sugar beets, and cotton.

## GROUND APPLICATION

Uniformly apply with properly calibrated ground equipment in 10.0 to 40.0 gallons of water per acre. A spray pressure of 20 to 40 psi is recommended.

### Application in Liquid Fertilizer

This product can be applied to the soil in liquid fertilizers, alone or in combination with Stealth Herbicide or Prowl® H<sub>2</sub>O herbicide, trifluralin (soybeans only), or Dual® herbicide. Follow all recommendations for this product label regarding incorporation, timing of application, special instructions and precautions. Apply treatments in 20.0 or more gallons of liquid fertilizer per acre with ground equipment. Always test the compatibility of this product with liquid fertilizer before mixing in the spray tank.

### Application with Dry Bulk Fertilizer

This product may be impregnated on dry bulk fertilizers. When applied as directed, PRE-Tector Plus EC /dry bulk fertilizer mixtures provide weed control equal to that provided by the same rates of PRE-Tector Plus EC applied in water or liquid fertilizer.

Follow all label directions for his product regarding application and incorporation, special instructions, and precautions. Apply PRE-Tector Plus EC /dry bulk fertilizer mixtures with ground equipment only.

All individual state regulations relating to dry bulk fertilizer, registration, labeling, and application are the responsibility of the individual and/or company selling the PRE-Tector Plus EC /dry bulk fertilizer mixtures.

A minimum of 200 pounds and a maximum of 450 pounds of dry bulk fertilizer impregnated with the recommended amount of PRE-Tector Plus EC must be applied per acre.

**DO NOT** impregnate this product onto coated ammonium nitrate or limestone because these materials will not absorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with this product. A minimum of 200 pounds of impregnated dry bulk fertilizer, excluding the weight of ammonium nitrate or limestone, must be applied per acre.

Apply this product at the rate of 2.5 pints per acre. Use the following table to determine the amount of this product to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer that will be applied per acre.

**RATE CHART FOR IMPREGNATION OF DRY BULK FERTILIZER WITH PRE-Tector Plus EC**

**Pints of PRE-Tector Plus EC per Ton of Fertilizer**

<b>PRE-Tector Rate Pt/A</b>	<b>Fertilizer Rate Lb/A</b>	<b>Pt/Ton</b>
<b>2.5</b>	<b>200</b>	<b>25.0</b>
	<b>250</b>	<b>20.0</b>
	<b>300</b>	<b>16.7</b>
	<b>350</b>	<b>14.3</b>
	<b>400</b>	<b>12.5</b>
	<b>450</b>	<b>11.0</b>

For those rates not listed in this table, calculate the pints of PRE-Tector Plus EC to be impregnated on a ton of dry bulk fertilizer using the following formula:

$$\frac{2000}{\text{pounds of dry fertilizer per acre}} \times \frac{2.5 \text{ pints PRE-Tector Plus EC / A (specified rate)}}{1} = \frac{\text{pints of PRE-Tector Plus EC / ton of fertilizer}}{1}$$

To impregnate this product on dry bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of this product onto the fertilizer during mixing.

If Stealth™ Herbicide or Prowl H<sub>2</sub>O is to be combined with this product prior to impregnation, premix the Stealth Herbicide or Prowl H<sub>2</sub>O with an equal volume of water before adding it to the this product. **DO NOT** mix undiluted Stealth Herbicide or Prowl H<sub>2</sub>O with this product.

Apply the PRE-Tector Plus EC /dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. The PRE-Tector Plus EC /dry bulk fertilizer mixture must be spread uniformly on the soil surface. Uneven spreading can cause poor weed control and crop injury.

Refer to **PREPLANT INCORPORATED APPLICATION** section of this label for incorporation directions.

#### **AERIAL APPLICATION**

Uniformly apply with properly calibrated aerial equipment in 5.0 or more gallons of water per acre. When applied **post-emergence** (to CLEARFIELD® corn), the addition of a nonionic surfactant AND fertilizer are required for optimum weed control. Add a nonionic surfactant at 0.25% volume/volume [v/v] (1.0 quart per 100 gallons of spray mixture) **AND** a liquid fertilizer at 1.25 to 2.5 gallons per 100 gallons of spray solution (see **POSTEMERGENCE APPLICATION**).

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the aerial drift reduction advisory information presented below.

#### **INFORMATION ON DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **WIND; TEMPERATURE AND HUMIDITY; and TEMPERATURE INVERSIONS**).

#### **CONTROLLING DROPLET SIZE**

**Volume.** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure. DO NOT** exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles.** Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation.** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

**Nozzle Type.** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **APPLICATION HEIGHT**

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### **SWATH ADJUSTMENT**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### **WIND**

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential.

**NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### **TEMPERATURE AND HUMIDITY**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### **TEMPERATURE INVERSIONS**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### **SENSITIVE AREAS**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Applicator is responsible for any loss or damage which results from spraying this product in a manner other than directed in this label. In addition, applicator must follow all applicable state and local regulations and ordinances.

#### **SOIL APPLICATION INSTRUCTIONS**

This product provides effective weed control in conservation tillage systems designed to meet conservation compliance requirements. This product can be applied preemergence or postemergence to CLEARFIELD corn. (**DO NOT** apply preplant incorporated to CLEARFIELD corn.) It can be applied early preplant, preplant incorporated or preemergence in soybeans. **DO NOT** apply postemergence to soybeans. It can also be applied in conventional, minimum tillage and no-till production systems. The application method of choice will depend on the anticipated weed spectrum and the preference of the applicator. If weeds have emerged, see instructions under **NO-TILL OR REDUCED TILLAGE (soybeans) section.**

This product controls weeds by uptake by weed roots, and translocation to the growing points where it stops weed growth.

Adequate soil moisture is required for optimum activity. For surface applications, rainfall or overhead irrigation is necessary to move this product into the weed germination zone. The amount of rainfall or irrigation required following application depends on existing soil moisture, soil texture and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is normally adequate. If adequate moisture is not received within 7 days after a surface-applied treatment, cultivation is recommended to control escaped weeds. In no-till situations where cultivation is not practical, a postemergence treatment is required to control escaped weeds. When adequate moisture is received after dry conditions, this product will provide residual control of susceptible germinating weeds; activity on established weeds will depend on the weed species and the location of its root system in the soil.

In ridge-till plantings, this product may be applied early preplant (soybeans only) or preemergence. If the herbicide is banded over the row, cultivation will be required for weed control between the beds. If cultivation is not possible or if weed pressure is heavy, apply this product in a broadcast application. Use proportionally less product per acre in a band application than in a broadcast application. If rainfall does not occur within 7 days of application, a rotary hoe incorporation will enhance weed control. **See PRE-EMERGENCE APPLICATIONS and PREPLANT INCORPORATED APPLICATIONS (soybeans only)** for further information.

#### **RESTRICTIONS FOR POSTEMERGENCE APPLICATION**

- **DO NOT** apply this product in a liquid fertilizer as a carrier.
- **DO NOT** apply this product when air temperatures are expected to reach or stay below 40 °F for 10 or more hours or when extended cold, wet conditions are predicted.
- **DO NOT** apply this product post emergence to soybeans.

#### **ADDITIVES**

**Postemergence application of this product requires the addition of a surfactant AND a fertilizer.**

#### **SURFACTANTS**

Use a nonionic surfactant containing at least 80% active ingredient. Add the surfactant at 0.25% v/v (1 quart per 100 gallons of spray solution).

#### **AND**

#### **FERTILIZER<sup>1</sup>**

Recommended nitrogen-based fertilizers include liquid fertilizers (such as 28% N, 32% N, or 10-34-0) at 1.25 to 2.5 gallons per 100 gallons of spray solution. Use the higher rate when weeds are under moisture or temperature stress. Instead of a liquid fertilizer, spray grade ammonium sulfate may be used at the rate of 12.0 to 15.0 lbs per 100 gallons of spray solution.

When an adjuvant (or a specific adjuvant product, such as a drift control agent) is to be used with this product, the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant is recommended.

<sup>1</sup> Applications of this product may be made with a nonionic surfactant only. (Liquid fertilizer is not required in the states of Alabama, Arkansas, bootheel of Missouri, Georgia, Louisiana, Mississippi, South Carolina and Tennessee.

#### **PRE-Tector Plus EC USE AREA RESTRICTIONS**

- **DO NOT** APPLY this product to soybeans or CLEARFIELD corn in North Dakota or in Minnesota north of State Highway 210.
- **DO NOT** make more than one application of this product per year.

**USE RATE (2.5 PINTS PER ACRE)** Apply this product at a broadcast rate of 2.5 pints per acre (to soybeans or CLEARFIELD<sup>®</sup> corn) for all methods of application: preplant, preplant incorporated (soybeans only) and preemergence (including minimum and no-till) or postemergence (CLEARFIELD corn only). At this broadcast rate, one gallon of this product will treat 3.2 acres.

## CROP SPECIFIC INFORMATION

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### FIELD CORN DIRECTIONS FOR USE

Apply PRE-Tector Plus EC only on selected field corn hybrids (Apply only to CLEARFIELD® corn hybrids) warranted by the seed company to possess resistance tolerance to direct application of herbicides containing active ingredient Imazethapyr.

**DO NOT** apply PRE-Tector Plus EC to corn hybrids which lack genetic resistance/tolerance to Pursuit. Contact your seed supplier, chemical dealer or Loveland Products, Inc. to obtain information regarding CLEARFIELD corn. With the exception of reduced tillage systems, plant into a firm seed bed that is free of clods and crop residue. Use only where adequate tillage is practiced to provide good soil coverage of the corn seed. Plant corn at least 1-1/2 inches deep to ensure good seed coverage. Make sure furrows close to prevent seed contact with the herbicide. Wait at least 7 to 10 days after postemergence treatments before cultivating.

Crops growing under stressful environmental conditions can exhibit various injury symptoms which may be more pronounced if herbicides are used. Stunting, leaf curling or temporary yellowing of the field corn plants may occur following applications of this product. Normal growth and appearance should resume within 1 to 2 weeks.

### PREEMERGENCE APPLICATIONS

**Surface Application After Planting** (CLEARFIELD® corn). Apply this product alone preemergence (surface treatment only) after planting. **DO NOT INCORPORATE** this product or corn injury may result.

**NOTE: Plant corn at least 1-1/2 inches deep. Adjust planters to ensure adequate seed coverage.**

The use of no-till planters in minimum tillage corn under conditions which do not allow good soil coverage of the corn seed can result in reduced crop stand or injury if this product contacts the germinating corn seed. Check equipment to ensure good seed coverage.

### POSTEMERGENCE APPLICATION (CLEARFIELD corn)

Apply this product as a postemergence treatment to CLEARFIELD corn when crop and weeds are actively growing. Apply this product before weeds exceed a height of 3 inches, unless otherwise indicated. **More restrictive crop growth stage limitations of tank mix partners MUST be followed.**

### RESTRICTIONS FOR POSTEMERGENCE APPLICATION

- **DO NOT** apply this product in a liquid fertilizer as a carrier.
- **DO NOT** apply this product when air temperatures are expected to reach or stay below 40° F for 10 or more hours or when extended cold, wet conditions are predicted.
- **DO NOT** apply this product post emergence to soybeans.

**Tank Mix Herbicide Combinations with this product.** When this product is used in combination with another herbicide, refer to the respective labels for rates, methods of application, proper timing, weeds controlled, restrictions, and precautions. It is the pesticide applicator's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Applicators must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Weeds Controlled

When applied as directed, this product will control or reduce competition from the weeds in the following list.

NOTE: C=Control

R = Reduced Competition

**Broadleaf Weeds**

Weeds Controlled	Preemergence	Postemergence	
		Maximum Leaf Stage****	Size (inches)
Alligator weed		4	1.0 to 3.0
Anoda, spurred	C	2	1.0 to 2.0
Artichoke, Jerusalem		8	6.0 to 10.0
Buffalobur	C*	R	1.0 to 3.0
Carpetweed	C		
Cocklebur, common	R	8	1.0 to 8.0
Galinsoga	C		
Jimsonweed	C*	4	1.0 to 3.0
Kochia	C**	4	1.0 to 3.0
Lambsquarters, common	C*	R	1.0 to 2.0
Mallow, Venice	C		
Marshelder	C	4	1.0 to 3.0
Morning glory,			
entireleaf	R	2	1.0 to 2.0
ivyleaf	R	2	1.0 to 2.0
pitted	R	2	1.0 to 2.0
smallflower	C	4	1.0 to 3.0
tall	R	2	1.0 to 2.0
Mustard species	C	4	1.0 to 3.0
Nightshade,			
black	C	4	1.0 to 3.0
Eastern black	C	4	1.0 to 3.0
hairy	C	4	1.0 to 3.0
Pigweed,			
Palmer	C		1.0 to 8.0
redroot	C	8	1.0 to 8.0
smooth spiny	C	8	1.0 to 8.0
Poinsettia, wild	C	8	
Puncturevine	C		
Purslane, common	C		
Pusley, Florida	C		
Ragweed,			
common	R	4	1.0 to 3.0
giant	R	4	1.0 to 3.0
Sage, barnyard	R	R	1.0 to 3.0
Sida, prickly (Teaweed)	C*		
Smartweed,			
ladysthumb	C	4	1.0 to 3.0
Pennsylvania	C	4	1.0 to 3.0
Spurge,			
prostrate	C	4	1.0 to 3.0

spotted	C	4	1.0 to 3.0
Sunflower	C*	4	1.0 to 3.0
Thistle, Canada		R	1.0 to 3.0
Velvetleaf	C	4	1.0 to 3.0
Waterhemp, tall***	C		

#### Grass Weeds

Weeds Controlled	Preemergence	Postemergence	
		Maximum Leaf Stage****	Size (in)
Barnyardgrass	R	3	1.0 to 3.0
Crabgrass,			
large	C	3	1.0 to 3.0
smooth	C	3	1.0 to 3.0
Crowfootgrass	C		
(Grass Weeds Cont.) Cupgrass, wooly	R	3	1.0 to 3.0
Foxtail,			
giant	C	6	1.0 to 6.0
green	C	3	1.0 to 3.0
yellow	C	3	1.0 to 3.0
Goosegrass	R		
Johnsongrass,			
rhizome		R	1.0 to 8.0
seedling	C	6	1.0 to 8.0
Millet, wild proso	R		
Panicum,	C		
browntop	C		
fall	C		
Texas	C		
Red rice		3	1.0 to 3.0
Sandbur, field	C		
Shattercane	R	6	1.0 to 8.0
Signalgrass, broadleaf	R	4	1.0 to 8.0
Sorghum almum	R		
Witchgrass	C	6	1.0 to 3.0

#### Sedges

Weeds Controlled	Preemergence	Postemergence	
		Maximum Leaf Stage****	Size (in)
Nutsedge,			
purple	R	R	1.0 to 3.0
yellow	R	R	1.0 to 3.0

\* Cultivation and/or a postemergence herbicide may be required for season-long control.

\*\*If kochia is resistant to ALS/AHAS inhibitors, it will not be controlled by this or other products with the ALS/AHAS mode of action. A sequential program and/or a tank mix partner with another herbicide mode of action must be used to control ALS/AHAS -resistant kochia.

\*\*\* If a heavy infestation of waterhemp species is anticipated, a tank mixture of this product herbicide plus additional Stealth Herbicide or Prowl H<sub>2</sub>O herbicide is required for control. Add Stealth Herbicide or Prowl H<sub>2</sub>O to this product mixture at the following rates, depending on soil type:

**Coarse texture soils:** Add Stealth Herbicide or Prowl H<sub>2</sub>O at the labeled rate.

**Medium texture soils:** Add Stealth Herbicide or Prowl H<sub>2</sub>O at the labeled rate.

**Fine texture soils:** Add Stealth Herbicide or Prowl H<sub>2</sub>O at the labeled rate.

Refer to the Stealth Herbicide or Prowl H<sub>2</sub>O label for specific use rates, application methods and application timings based on soil texture and soil organic matter content. A postemergence herbicide such as Cobra<sup>®</sup> herbicide or Flexstar herbicide may be needed to control waterhemp species escapes. Refer to individual product labels for specific uses and directions. It is the pesticide applicator's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Applicators must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

\*\*\*\*The number under **Maximum Leaf Stage** indicates the **MAXIMUM** number of leaves at which weeds should be sprayed postemergence. **DO NOT** count cotyledon leaves when determining weed stage of growth.

**ENGLISH PEAS, LIMA BEANS, NAVY, GREAT NORTHERN, RED KIDNEY, BLACK TURTLE, PINTO, CRANBERRY, AND  
SMALL WHITE TYPE DRY BEANS ONLY**

**Use only in Illinois, Iowa, Michigan, Minnesota, North Dakota, South Dakota and Wisconsin**

**Information**

Reduced crop growth, quality, yield and/or delayed maturity may result from an application of this product to edible legume vegetables. Since crop maturity may be delayed, timing of harvest may need to be adjusted accordingly.

**DIRECTIONS FOR USE**

**DO NOT** apply this product if planting is delayed and chance of frost prior to maturity is likely.

**DO NOT** apply this product if cold and/or wet conditions are present or predicted to occur within 1 week of application.

**DO NOT** apply this product through any type of irrigation system.

**DO NOT** apply by air.

**DO NOT** make more than one application of this product per year.

**DO NOT** apply to Domino variety black turtle beans.

**DO NOT** apply this product after June 30.

Allow at least 60 days between application and harvest of black turtle, cranberry, great Northern, navy, pinto, red kidney and small white dry beans.

Allow at least 30 days between application and harvest of English peas and lima beans.

Use this product **ONLY** if proper agronomic practices have been utilized, including good soil fertility, proper crop rotation, disease and insect management, and tillage practices that eliminate compaction and hardpans.

Use of PRE-Tector EC in accordance with labeling directions is expected to result in normal growth of rotational crops in most situations, however various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

**Preplant Incorporated Applications**

Apply this product within 1 week before planting. Applied preplant incorporated.

This product may be tank mixed with other registered herbicides. Refer to the following table for use rate.



Soil Type	PRE-Tector Plus EC Use Rate (ounces/acre)
Sands, loamy sands in Michigan	<b>DO NOT USE</b>
Sandy loams and all other soils with $\leq$ 2% organic matter (OM) in Michigan, Minnesota (north of Highway 210), North Dakota, and South Dakota	20.0 (1.25 pts/A)
All other soils with $>$ 2% OM in Michigan and any soil type in Illinois, Iowa, Minnesota (south of Highway 210), and Wisconsin. <b>Not for use in North Dakota at this rate.</b>	30.0 (1.88 pts/A)

For control of the annual grass weed species listed on the Stealth Herbicide or Prowl® H<sub>2</sub>O herbicide labels at the 20.0 oz/A (1.25 pts/A) rate of this product, refer to the labeled rate of Stealth Herbicide OR the labeled rate of Prowl H<sub>2</sub>O.

For control of the annual grass weed species listed on the Stealth Herbicide or Prowl H<sub>2</sub>O labels at the 30.0 oz/A (1.88 pts/A) rate of this product, refer to the labeled rate of Stealth Herbicide OR the labeled rate of Prowl H<sub>2</sub>O

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Weeds Controlled

This product applied to low organic matter soils at the broadcast rate of 20.0 oz/A (1.25 pts/A) preplant incorporated will control light to moderate infestations of:

- Mustard, wild
- Nightshade, black
- Nightshade, Eastern black
- Pigweed, redroot

This product applied at the broadcast rate of 30.0 oz/acre (1.88 pts/acre) preplant incorporated will control:

- Mustard, wild
- Nightshade, black
- Nightshade, Eastern black
- Nightshade, hairy
- Pigweed, redroot

### SOYBEANS

#### DIRECTIONS FOR USE

Apply this product preplant or preplant incorporated from 45 days prior to planting up to planting. Incorporate within 7 days of application if rainfall is not received.

Occasionally, internode shortening and/or temporary yellowing of soybean plants may occur following applications of this product. This will not affect soybean yields.

After this product is applied, some susceptible weeds emerge, growth stops, and the weeds either die or are not competitive with the crop.

This product kills weeds by herbicide uptake by weed roots and rapid translocation to the growing points. Therefore, adequate soil moisture is important for optimum activity. When adequate soil moisture is present, this product will provide residual control of susceptible germinating weeds.

Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

Naturally occurring biotypes\* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with either the ALS/AHAS enzyme-inhibiting mode of action or the mitotic-inhibiting mode of action. Other herbicides with the ALS/AHAS enzyme inhibiting mode of action include the sulfonyleureas (e.g. Accent® herbicide or Classic® herbicide, etc.), the sulfonamides (e.g. Broadstrike® herbicide, etc.), and the pyrimidyl benzoates (e.g. Staple® herbicide, etc.) with the mitotic-inhibiting

mode of action include other dinitroaniline herbicides such as Stealth Herbicide or Prowl® H<sub>2</sub>O herbicide. If naturally occurring ALS/AHAS-resistant biotypes are present in a field, this product and/or any other ALS/AHAS enzyme inhibiting mode of action herbicide should be tank mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

\*A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants.

#### **PREEMERGENCE APPLICATIONS**

##### **Surface Application Before Planting (soybeans).**

This product may be surface applied prior to soybean planting (up to 45 days). If sufficient rain does not occur before planting to activate this product, shallow incorporation before planting will enhance weed control. This product may be surface applied prior to soybean planting both north and south of Interstate Highway I-80.

##### **Surface Application After Planting (soybeans).**

This product may be surface applied up to 2 days after soybean planting (before crop emergence) south of Interstate Highway 1-80 only. **DO NOT APPLY PRE-TECTOR AFTER SOYBEAN PLANTING** north of Interstate Highway I-80.

##### **NO-TILL OR REDUCED TILLAGE (soybeans).**

This product is effective in controlling weeds in conservation tillage production systems. Apply product treatments up to 45 days prior to planting (early preplant) but before crop emergence.

##### **PREPLANT INCORPORATED APPLICATION (soybeans only).**

This product may be applied following land preparation and should be thoroughly incorporated to a depth of 1 to 2 inches. When applied to beds, maintain this product in the surface 1 to 2 inches of the finished beds. Application may be made up to 45 days prior to planting (early preplant).

Incorporate prior to soybean planting and within 7 days of application.

If soybeans are planted on beds, apply and incorporate after bed formation using power take-off (PTO) driven equipment or a rolling cultivator. For optimum weed control, this product should be maintained in the surface 1 to 2 inches of the finished bed.

#### **Herbicide Combinations**

In addition to those broadleaf herbicides specifically mentioned elsewhere in this label, applications of this product may be followed by one or more of the following herbicides: Basagran® herbicide, Blazer® herbicide, Cobra® herbicide,

Flexstar, Reflex® herbicide, Storm® herbicide, or Roundup® herbicide. **DO NOT** apply Roundup Ultra® herbicide postemergence to soybeans that are not glyphosate resistant. For sequential treatments with this product and other products, a sufficient time period should occur between treatments to allow an appropriate assessment of weed control needs.

Heavy infestations of some broadleaf weeds such as common ragweed and giant ragweed that germinate deep in the soil and may emerge at various times during the growing season, may require cultivation or the application of a postemergence herbicide, such as a diphenylether, for season-long control.

Under conditions of heavy grass pressure, a grass herbicide such as Stealth Herbicide or Prowl® H<sub>2</sub>O herbicide or trifluralin may be tank mixed with this product.

This product may be followed by herbicides registered for postemergence grass control in soybeans.

This product must be used only in accordance with the directions on this label. When this product is used in combination with another herbicide, refer to the respective labels for rates, methods of application, proper timing, weeds controlled, restrictions, and precautions. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### **Fall Applications of PRE-Tector Plus EC (South Dakota only)**

Late fall applications of this product may be made for control of weeds in no-till soybeans, rather than in the spring prior to planting soybeans. Apply this product after October 31 and prior to ground freeze-up in the winter. Fall and winter precipitation will activate the herbicide for control of most winter annual weeds and spring-germinating weeds in no-till soybeans.

When planting no-till soybeans following small grain harvest, apply a burndown application of Gramoxone® Extra herbicide, Roundup, or Touchdown® herbicide to the small grain stubble within three weeks of harvest to control weeds present after harvest.

**APPLICATION RATES**

Apply this product at the rate of 2.5 pints/acre. If heavy grass pressure is expected, add Stealth Herbicide or Prowl H<sub>2</sub>O to the spray mixture at the rate of 1.25 pints/acre.

**Weeds Controlled**

When applied as directed, this product will control or reduce competition from the weeds in the following list.

**NOTE:** C=Control

R=Reduced Competition

**Broadleaf Weeds**

Weeds Controlled	Preplant Incorporated	Preemergence
Anoda, spurred	C	C
Buffalobur	C*	C
Carpetweed	C	C
Cocklebur, common	R	
Devilsclaw	C	
Galinsoga	C	C
Jimsonweed	C*	
Kochia**	C	C
Lambsquarters, common	C*	C
Mallow, Venice	C	
Morning glory,		
entireleaf	R	
ivyleaf	R	
pitted	R	
smallflower	C	C
tall	R	
Mustard species	C	C
Nightshade,		
black	C	C
Eastern black	C	C
hairy	C	C
Pigweed,		
Palmer	C	C
redroot	C	C
smooth	C	C
spiny	C	C
Puncturevine	C	C
Purslane, common	C	C
Pusley, Florida	C	C
Ragweed,		
common	R	R

Weeds Controlled	Preplant Incorporated	Preemergence
giant	R	R
Sida, prickly (Teaweed)	C*	
Smartweed,		
ladysthumb	C	C
Pennsylvania	C	C
Spurge,		
prostrate	C	C
spotted	C	C
Sunflower	C*	
Velvetleaf	C	
Waterhemp, tall***	C	C

\* Cultivation and/or a postemergence herbicide may be required for season-long control.

\*\* If kochia is resistant to ALS/AHAS inhibitors, it will not be controlled by this or other products with the ALS/AHAS mode of action. A sequential program and/or a tank mix partner with another herbicide mode of action must be used to control ALS/AHAS-resistant kochia.

\*\*\* If a heavy infestation of waterhemp species is anticipated, a tank mixture of this product plus additional Stealth Herbicide or Prowl® H<sub>2</sub>O herbicide is required for control. Add Stealth Herbicide or Prowl H<sub>2</sub>O to this product mixture at the following rates, depending on soil type.

Coarse texture soils: Add Stealth Herbicide or Prowl H<sub>2</sub>O at the labeled rate.

Medium texture soils: Add Stealth Herbicide or Prowl H<sub>2</sub>O at the labeled rate

Fine texture soils: Add Stealth Herbicide or Prowl H<sub>2</sub>O at the labeled rate. Refer to the Stealth Herbicide or Prowl H<sub>2</sub>O label for specific use rates, application methods and application timings based on soil texture and soil organic matter content. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. A postemergence herbicide such as Blazer® herbicide, Cobra® herbicide, Flexstar® herbicide or Reflex® herbicide may be needed to control waterhemp species escapes. Refer to individual product labels for specific uses and directions.

#### Grass Weeds

Weeds Controlled	Preplant Incorporated	Preemergence
Barnyardgrass	C	C
Crabgrass,		
large	C	C
smooth	C	C
Crowfootgrass	C	C
Cupgrass, wooly	R	
Foxtail,		
giant	C	C
green	C	C
yellow	C	C
Goosegrass	C	C
Itchgrass	R	
Johnsongrass,		
rhizome	R	
seedling	C	C
Millet, wild proso	R	R
Panicum,		
browntop	C	C

Weeds Controlled	Preplant Incorporated	Preemergence
fall	C	C
Texas	C	C
Sandbur, field	C	C
Shattercane	R	
Signalgrass, broadleaf	C	C
Sorghum almum	C	R
Witchgrass	C	C

#### Sedges

Weeds Controlled	Preplant Incorporated	Preemergence
Nutsedge,		
purple	R	
yellow	R	

#### ROTATIONAL CROP GUIDELINES

In the event of a crop loss, the bean or pea crop may be replanted.

**DO NOT** graze or feed treated forage, hay or straw to livestock.

The following rotational crops may be planted after applying this product at the specified rate:

1. Anytime:

CLEARFIELD® corn

Edible bean and pea types listed on this label

Lima beans

Peanuts

Southern peas

Soybeans

2. Two months after application of this product:

Snap beans

3. Four months after application of this product:

Edible bean and pea types listed on this label

(other than lima beans and Southern peas)

Wheat

4. Eight and one-half months after application of this product:

Field corn

Field corn grown for seed\*

\*Several seed companies have tested a wide range of inbreds for sensitivity to soil residues from this product and have reported good crop safety. However, due to the proprietary nature of "seed production, Loveland Products, Inc. has not been given access to the inbred data. Growers are directed to contact the seed company for information and recommendations regarding the planting of corn grown for seed in fields treated with this product the previous year: Since growing conditions, environmental conditions, and grower practices are beyond the control of Loveland Products, Inc., all risks and consequences associated with planting seed corn inbreds into fields treated previously with this product shall be assumed by the user.

5. Nine and one-half months after application of this product:

Alfalfa

Rye

Tobacco

6. Eighteen months after application of this product:

Barley

Oats

Sorghum

Cotton

Popcorn

Sunflower

Lettuce

Safflower

Sweet corn

7. Twenty-six months after application of this product:

Potatoes

8. Forty months after application of this product \*\*:

All crops not listed elsewhere in the **ROTATIONAL CROP GUIDELINES**.

\*\*Following forty months after application of this product and before planting any crop not listed elsewhere in the **ROTATIONAL CROP GUIDELINES**, a successful field bioassay must be completed. The field bioassay consists of a test strip of the intended rotational crop planted across the previously treated field and grown to maturity. The test strip should include low areas and knolls, and include variations in soil such as type and pH. If no crop injury is evident in the test strip, the intended rotational crop may be planted the following year.

Sugar beet production can be reduced when grown in soil conditions with pH less than 6.5.

If the field is limed to adjust pH prior to planting rotational crops not listed in the **ROTATIONAL CROP GUIDELINES**, apply the lime at least 12 months prior to planting the rotational crop.

Note: Use of this product in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

Barley Rotation Interval Based on pH, Moisture and Tillage		Moldboard Plowing	
		No	Yes
pH and Rainfall Requirements	>14 inches R + I and pH >6.2	9.5 months	9.5 months
	<14 inches R + I and pH <6.2	18 months	9.5 months

**R+I** = Rainfall and overhead irrigation from the time of application of this product up until time of barley planting. **Does not include furrow or flood irrigation.**

The possibility of injury to barley planted the next season increases **if less than normal precipitation occurs within the first two months after application of this product.**

**EXCEPTION TO ROTATIONAL CROP GUIDELINES**

**Corn inbred lines**

Corn inbred seed lines may be planted the year following an application of this product. Several seed companies have tested a wide range of inbreds for sensitivity to soil residues of this product and have reported good crop safety. However, due to the proprietary nature of seed production, Loveland Products, Inc. has not been given access to the inbred data. Growers are directed to contact the seed company for information and recommendations regarding the planting of corn grown for seed in fields treated with this product the previous year. Since growing conditions, environmental conditions and grower practices are beyond the control of Loveland Products, Inc., all risks and consequences associated with planting seed corn inbreds into fields treated previously with this product shall be assumed by the user.

**PRECAUTIONS**

Only rotational crops harvested at maturity may be used for feed or food.

In the event of a crop loss due to weather, lima beans, peanuts, Southern peas or soybeans can be replanted.

**DO NOT** work the soil deeper than 2 inches. CLEARFIELD® corn may also be replanted, but **DO NOT** rework the soil. Plant the corn at least 2 inches deep or below the treated zone. **DO NOT** apply a second treatment of this product.

**CLEARFIELD corn**

There should be an interval of at least 45 days between an application of this product and corn harvest (silage, fodder or grain).

**DO NOT** graze or feed treated corn forage, silage, fodder or grain to livestock or at least 45 days after an application of this product.

If field corn is furrow irrigated, till the soil prior to planting winter wheat or barley. The beds should be broken up and the soil mixed with tillage equipment set to cut 4 to 6 inches deep.

All soil insecticides, including labeled, banded or in-furrow applications, may be used in combination with Pioneer imidazolinone-resistant (IR) corn hybrids.

Registered organophosphate insecticides, such as banded applications of Counter® 15G systemic insecticide, nematicide, or Thimet® soil and systemic insecticide or in-furrow applications of other registered carbamate or pyrethroid insecticides, may be used in combination with this product applications.

**DO NOT** USE Counter 15G in-furrow with imidazolinone-tolerant corn hybrids. Loveland Products Inc. has not tested all hybrids in which the imidazolinone-tolerance trait is claimed and cannot be responsible for factors which are beyond its control, such as growing conditions, environmental conditions, grower practices and the specific genetics of each hybrid tolerance to this product and insecticide applications.

**Sweet corn and popcorn varieties (Illinois, Iowa, Michigan, Minnesota and Wisconsin only)**

Sweet corn and popcorn varieties may be planted the year following an application of this product. Some sweet corn and popcorn varieties may be injured when planted at less than 18 months following an application of this product. Before planting sweet corn for processing, contact the processor company for information and recommendations regarding the tolerance of sweet corn varieties planned for fields treated with this product the previous year.

**DO NOT** plant fresh market sweet corn varieties prior to 18 months after use of this product.

Before planting popcorn, contact the popcorn company for information and recommendations regarding the tolerance of popcorn varieties planned for fields treated with this product the previous year. Since growing conditions, environmental conditions, and grower practices are beyond the control of Loveland Products, Inc., to the extent consistent with applicable law, ALL RISKS AND CONSEQUENCES ASSOCIATED WITH PLANTING SWEET CORN OR POPCORN VARIETIES INTO FIELDS TREATED PREVIOUSLY WITH THIS PRODUCT SHALL BE ASSUMED BY THE USER. Stunting and maturity delay or other adverse effects may result when sweet corn or popcorn are planted following use of this product.

**Soybeans**

If soybeans are furrow irrigated, till the soil prior to planting winter wheat or barley. The beds should be broken up and the soil mixed with tillage equipment set to cut 4 to 6 inches deep.

There should be an interval of at least 85 days between an application of this product and soybean harvest.

**DO NOT** graze or feed treated soybean forage, hay or straw to livestock.

Application of products containing chlorimuron ethyl (e.g. Classic® herbicide, etc.), imazaquin (e.g. Scepter® herbicide), imazethapyr (e.g. Pursuit® herbicide), imazamox (e.g. Raptor® herbicide), or flumetsulam (e.g. Broadstrike® herbicide) the same year as labeled rates of this product may increase the risk of injury to sensitive rotational crops. Consult labels for uses of these products in combinations.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**PESTICIDE STORAGE: Keep from freezing. DO NOT store below 40 °F. Shake well before using.** Store in original container in a dry, temperature controlled, secure place.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:** [[Note to Reviewer: The following statement will be included on all Final Printed Labels bearing multiple Container Handling statements] **NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container handling instructions below that apply to your container type / size." ]

**[Nonrefillable Containers 5 Gallons or Less]** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**[Nonrefillable containers larger than 5 gallons]** Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**[Refillable containers]** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

### In Case of Spill

For help with any spill, leak, fire or exposure involving this material, call day or night: CHEMTREC - 1-800-424-9300.



### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. Box 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

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For non-emergency (e.g., current product information), call Loveland Products, Inc.: 1-888-574-2878.

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